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RE: Request for Public Comment on “Draft Policy on Coastal Erosion and Response and Background Material”

Dear Mr. Baird,

4 June 2001

In response to your request for public comments on the “Draft Policy on Coastal Erosion and Response and Background Material” (March 29, 2001) I would like to submit the following comments:

1. **Policy Really Needed.** The proposed “Policy on Coastal Erosion” is a valuable contribution for establishing a uniform strategy for managing the problem of coastal erosion, and will be of major benefit to all of the state agencies and to the public.
2. **Role of Federal Agencies.** How do you plan to gain concurrence by the federal agencies? Although, the policy will clarify the state’s position and priorities, the federal agencies are likely to continue to review proposed projects based on the policy established by each federal agency. The recent “greening” of the ACOE would appear to be helpful, except it is hard to see how their funding procedures for determining if there is a federal interest in a project would handle a proposal to fix or remove an old ACOE flood control channelizing project. Perhaps, the draft policy should contain a section on how state and federal jurisdictions and examine consistency of the proposed draft policy.
3. **All Structures.** At the workshop held in Encinitas on 5/24/01, the public assumed that “structures” were narrowly defined as houses located on top of eroding bluffs. The policy needs to be equitably applicable to all coastal structures, including construction, protection, and repair for all types of coastal structures including the following: piers, roads (rip rap and protection), parks, jetties, railroad tracks, sewer outfalls (ballasting), businesses, homes, etc. Also, it might be useful to review how the draft policy contrasts with the arguments presented in *The Corps and the Shore* (Pilkey and Dixon 1996) and *Restoring and Protecting Marine Habitat – The Role of Engineering and Technology* (National Academy Press 1994).
4. **Sand versus Reefs.** In Southern California subtidal hard bottom substrates (rocky reefs) are generally considered to be valuable in Southern California, because this habitat is in short supply. In contrast, subtidal soft bottom substrates (sand) are abundant and considered to be less valuable. The presence of subtidal rocky reefs and their associated habitats in North San Diego County were a significant obstacle to permitting the recent Sandag proposal for beach replenishment by mining offshore sand deposits and pumping the sand on to the beach. Some portion of these rocky reefs were probably exposed by erosion of subtidal sand and subsequently colonized. The low elevation of these reefs has subjected them to alternate periods of burial and exposure by long term cycles of deposition and erosion of subtidal sand. The problem is that beach replenishment creates an immediate point source of sediment for erosion and dispersal by waves, which may lead to burial of local reef habitat. Such burial events should be short term. Deltaic deposits at the mouths of rivers also provide episodic sources of sand. Perhaps, these “temporary” low relief reefs should not be weighted in the overall habitat inventory as much as the more permanent, higher relief rocky reefs, even though they may function as intermittent habitat for juvenile lobster, surf grass, etc.

5. **Both Sand Habitat and Reef Habitat are Needed.** Eltringham (1971) argued that the shore zone as a whole constitutes an ecosystem, but that individually sand beaches and rocky shores do not constitute separate ecosystems (see Attachment A). Ecosystems have been defined as including both a "grazing food chain" and a "detrital food chain." The grazing food chain (herbivores feeding on macrophytes) is typical of rocky shores and the detrital food chain (herbivores feeding on dead plant materials) is typical of sand beaches. Hence, the export of rocky shore macrophyte biomass to sand beaches is critical to the proper recycling of nutrients by sand beaches (see Comment No. 6). Hence, presence of both substrate types in reasonable proximity (based on the ability of waves to transport algal wrack debris) is important to the proper functioning of the whole shore ecosystem. Hence, lack of sand beach habitat is a severe limitation to proper functioning of the intertidal ecosystem.
6. **Sand Beaches Provide Significant Ecological Habitat.** The focus of the draft policy was primarily on the physical aspects of beach erosion and shore protection. The significance of the ecological role of sand beaches was not mentioned in the draft policy. Sand beaches are a critical component of supporting the ecology of the near shore zone. This ecological functions are probably more important than the physical functions. Sand beaches provide a habitat matrix for invertebrates, forage base for birds and fish, and cycling of nutrients to the near shore zone. I have enclosed two articles that expand on the role of sand beaches and their management.
7. **Relationship to Coastal Wetlands.** The Convention on Wetlands of International Importance (Ramsar, Iran 1971) was implemented in 1975 to protect wetlands of international importance for migratory birds. Most of the coastal wetlands in San Diego County were nominated several years ago for inclusion in this international treaty. It is my understanding that their nomination will be finalized this year. This has important implications for the draft policy since migratory shorebirds utilize both open sand beaches and coastal wetlands.

References:

- Eltringham, S.K. 1971. Life in Mud and Sand. The English Universities Press Ltd. London. 218 pp.
- Brown, A. and A. McLachlan. 1990. Ecology of Sandy Shores. Elsevier. New York. 328 pp.
- National Research Council. 1994. Restoring and Protecting Marine Habitat – The Role of Engineering and Technology. Marine Board. National Academy Press 1994. 193 pp.

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I HOPE THIS HELPS.

Alan Tatum